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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Appellant:

Coupland et al.

Filed: May 22, 2001

Serial No.: 09/862,865

For: SYSTEM AND METHOD FOR  
PROVIDING LODGING  
RESERVATIONS DATA

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Art Unit: 3625

Examiner: Matthew S. Gart

Docket No.: 013742-0018 (B72489)

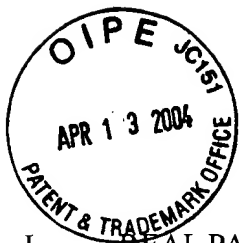
APPEAL BRIEF

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BY: Kelly Breeze 

DATE: April 9, 2004

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re:	Patent Application of Coupland et al.	: Group Art Unit: 3625 : : :
Appln. No.:	09/862,865	: Examiner: Matthew S. Gart : : :
Filed:	May 22, 2001	: : : :
For:	SYSTEM AND METHOD FOR PROVIDING LODGING RESERVATIONS DATA	: Attorney Docket : 013742.0018 (B72489)

Mail Stop Appeal Brief – Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**APPELLANT'S BRIEF (37 C.F.R. § 1.192)**

This brief is in furtherance of the Notice of Appeal, filed in this case on February 3, 2004 and received by the U.S.P.T.O. on February 9, 2004.

The fees required under § 1.17 are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

5 This brief is transmitted in triplicate. (37 C.F.R. § 1.192(a)).

This brief contains these items under the following headings, and in the order set forth below (37 C.F.R. § 1.192(c)).

- I. REAL PARTY OF INTEREST
- II. RELATED APPEALS AND INTERFERENCES
- 10 III. STATUS OF CLAIMS
- IV. STATUS OF AMENDMENTS
- V. SUMMARY OF INVENTION

- VI. ISSUES
- VII. GROUPING OF CLAIMS
- VIII. ARGUMENTS: REJECTIONS UNDER 35 U.S.C. 102
- IX. ARGUMENTS: REJECTIONS UNDER 35 U.S.C. 103
- 5 X. APPENDIX OF CLAIMS INVOLVED IN THE APPEAL
- XI. OTHER MATERIAL THAT APPELLANT CONSIDERS NECESSARY OR DESIRABLE

The final page of this brief bears the practitioner's signature.

I. REAL PARTY OF INTEREST (37 C.F.R. § 1.192(c)(1))

10 The real party in interest in this appeal is Pegasus Solutions, Inc.

II. RELATED APPEALS AND INTERFERENCES (37 C.F.R. § 1.192(c)(2))

There are no appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS (37 C.F.R. § 1.192(c)(3))

15 The status of the claims in this application are:

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

Claims in the application are: 25 claims. (Claims 1-25)

Claims currently pending in the application: 25 pending claims

B. STATUS OF ALL THE CLAIMS

- 20 1. Claims cancelled: NONE
- 2. Claims withdrawn from consideration but not cancelled: NONE
- 3. Claims pending: 1-25
- 4. Claims allowed: NONE.
- 5. Claims rejected: 1-25

25 C. CLAIMS ON APPEAL

The claims on appeal are: 1-25

#### IV. STATUS OF AMENDMENTS (37 C.F.R. § 1.192(c)(4))

The claims presently pending are those submitted May 5, 2003 in an Amendment After Final.

#### V. SUMMARY OF THE INVENTION (37 C.F.R. § 1.192(c)(5))

5       The following summary is provided without any intention to limit the scope of the claims. The subject matter of claims 1-25 is summarized below.

      Claim 1 includes a system for providing reservation data that comprises a reservation data system interface receiving reservation inventory data and inventory update data from two or more reservation systems. A master reservation system coupled to the reservation data system  
10       receives the reservation inventory data and stores the reservation inventory data in a database, and receives the inventory update data and updates the database with the inventory update data. A user interface system coupled to the master reservation system receives reservation request data and provides updated reservation inventory data in response to the reservation request data. The inventory update data is generated in real time as each reservation system is updated to  
15       reflect current inventory.

      Claim 8 includes a method for providing reservation data that comprises storing reservation inventory data from two or more reservation data systems in a database. Inventory status update data is received from one or more of the reservation data systems in real-time as such inventory status update data is implemented in the associated reservation data system. The  
20       database is updated with the inventory status update data, and the inventory status update data is stored with an associated sequence number.

      Claim 15 includes a method for providing reservation data that comprises storing reservation data reflecting the current status of available inventory from two or more properties from a room availability database from each of two or more reservation data systems in a  
25       database. A request for reservation data is received for one or more of the properties at a central interface. Reservation data is provided reflecting the current status of the property. The available inventory at each of the two or more properties can be independently modified from an interface other than the central interface, and the current status of the available inventory at each property reflects such independent modifications.

30       Narrower embodiments of the invention are described below.

Claim 2 depends from claim 1 and includes a monitoring system coupled to the master reservation system that stores each set of inventory update data and sequence number data associated with the set of inventory update data.

5 Claim 3 depends from claim 1 and includes a master reservation interface system coupled to the reservation data system interface and one of the reservation data systems that receives the inventory update data from the reservation data system and transmits the inventory update data to reservation data system interface.

10 Claim 4 depends from claim 1 and includes that the master reservation system further comprises a chain system receiving chain modification data and updating the database with the chain modification data.

Claim 5 depends from claim 1 and includes that the master reservation system further comprises a property system receiving property modification data and updating the database with the property modification data.

15 Claim 6 depends from claim 1 and includes that the master reservation system further comprises a rate plan system receiving rate plan modification data and updating the database with the rate plan modification data.

Claim 7 depends from claim 1 and includes that the master reservation system further comprises a distribution channel system receiving distribution channel modification data and updating the database with the distribution channel modification data.

20 Claim 9 depends from claim 8 and includes that storing reservation inventory data from two or more reservation data systems in a database comprises storing hotel chain data.

Claim 10 depends from claim 8 and includes that storing reservation data from two or more reservation data systems in a database comprises storing property data.

25 Claim 11 depends from claim 8 and includes that storing reservation data from two or more reservation data systems in a database comprises storing rate plan data.

Claim 12 depends from claim 8 and includes that receiving inventory status update data from one or more of the reservation data systems comprises receiving room availability update data that indicates that a room is available that had previously been indicated as being reserved.

30 Claim 13 depends from claim 8 and includes that receiving inventory status update data from one or more of the reservation data systems comprises receiving room price update data.

Claim 14 depends from claim 8 and includes that receiving inventory status update data from one or more of the reservation data systems comprises receiving distressed inventory data.

Claim 16 depends from claim 15 and includes that storing reservation data reflecting the current status of available inventory from two or more properties from a room availability database from each of two or more reservation data systems in a database further comprises  
5 updating the database with status update data reflecting the availability of previously unavailable inventory.

Claim 17 depends from claim 16 and includes that updating the database with status update data further comprises storing the status update data and a unique transaction sequence  
10 number associated with the status update data.

Claim 18 depends from claim 15 and includes that receiving the request for reservation data for one or more of the properties comprises receiving a request for distressed inventory.

Claim 19 depends from claim 15 and includes that receiving the request for reservation data for one of the properties comprises receiving a request for rate plan data.

Claim 20 depends from claim 15 and includes that receiving the request for reservation  
15 data for one of the properties comprises receiving a request for negotiated rate data.

Claim 21 depends from claim 3 and includes that the reservation inventory data includes room availability data for each of the available rooms at each property managed by each of the two or more reservation systems, and that the inventory update data includes rented room data at  
20 one of the properties that reflects rooms that were previously indicated as being available at that property and which have since become unavailable.

Claim 22 depends from claim 1 and includes a master reservation interface system coupled to the reservation data system interface and one of the reservation data systems that receives the inventory update data from the reservation data regardless of the source of the  
25 inventory update data system and that transmits the inventory update data to the reservation data system interface. A status update system provides status update data that includes room reservation data and rate change data to the master reservation interface system when the status update data becomes effective for the corresponding reservation system. The master reservation interface system transmits the status update to the master reservation system upon receiving the  
30 status update data from the status update system.



Claim 23 depends from claim 15 and includes that storing reservation data reflecting the current status of available inventory from two or more properties from two or more reservation data systems in a database comprises receiving status update data at a local property reservation system when a room at a property has been reserved, transmitting the status update data to the database, and updating a central database to decrease the number of available rooms for the property.

Claim 24 depends from claim 15 and includes that storing reservation data reflecting the current status of two or more properties from two or more reservation data systems in a database comprises receiving status update data at a local property reservation system when a rate plan at a property has been changed, transmitting the status update data to the database, and updating a central database to change the rate plan for each of the rooms for the property.

Claim 25 depends from claim 15 and includes that storing reservation data reflecting the current status of two or more properties from two or more reservation data systems in a database comprises receiving status update data at a hotel chain reservation system when distribution channel data for a hotel chain has been changed, transmitting the status update data to the database, and updating a central database to change the distribution channel data for each of two or more properties in the hotel chain.

#### VI. ISSUES ((37 C.F.R. § 1.192(c)(6))

Whether claims 1-13, 15-17 and 19-25 are unpatentable under 35 USC § 102(e) over MacDonald.

Whether claims 14 and 18 are unpatentable under 35 U.S.C. § 103(a) over MacDonald in view of HRN.

#### VII. GROUPING OF CLAIMS ((37 C.F.R. § 1.192(c)(7))

The following groups of claims are considered as standing or falling together for the reasons discussed below:

Group I – claims 1, 15 and 23-25.

Group II – claims 2, 8, 13, and 17.

Group III – claim 3 and 22.

Group IV – claims 4 and 9.

Group V – claims 5 and 10.  
Group VI – claims 6, 11, 19 and 20.  
Group VII – claim 7.  
Group VIII – claims 12, 16 and 21.  
5 Group IX – claims 14 and 18.

VIII. ARGUMENTS ((37 C.F.R. § 1.192(c)(8)(iii))  
ARGUMENT: REJECTIONS UNDER 35 U.S.C. 102

1. Background to Presently Claimed Invention

10 In one exemplary embodiment, the presently claimed invention provides a system for providing reservation data that includes a reservation data system interface receiving reservation inventory data and inventory update data from two or more reservation systems. A master reservation system coupled to the reservation data system receives the reservation inventory data and stores the reservation inventory data in a database, and receives the inventory update data and updates the database with the inventory update data. A user interface system coupled to the  
15 master reservation system receives reservation request data and provides updated reservation inventory data in response to the reservation request data. The inventory update data is generated in real time as each reservation system is updated to reflect current inventory.

2. MacDonald

20 MacDonald discloses a system and method for managing reservations, e.g., reservations for units in lodging facilities such as cabins on cruise ships and rooms or suites in hotels, using the Internet. A person wishing to make a reservation can access information regarding the availability of units (e.g., cabins or rooms) during a particular time period by visiting a website that includes plans showing various areas of a place of accommodation (e.g., a deck of a ship or floor of a hotel). MacDonald further discloses that the website server must be separately  
25 configured for each cruise ship or hotel, and that any changes to the reservation information must be made directly to the website server.

3. Patentability of Group I (claims 1, 15 and 23-25).

There can be a large number of hotels or other rental properties (hereinafter collectively referred to as “hotels”) in a location of interest to a person that is seeking to make a reservation

for lodging. Each of these different hotels can operate a stand-alone reservation system, such that it is necessary to contact each hotel directly to determine whether there are any available rooms at the hotel. Although early reservation websites allowed hotels to consolidate general information regarding room rates and other information in a single location, such websites did not include the ability to provide information as to availability of rooms on a certain date. Instead, the user would have to access the reservation system of a desired hotel to determine whether any rooms were available for a desired date. Thus, a user might visit a number of different reservation systems and be required to repetitiously enter the same information regarding the dates of interest, the number of rooms, the number of occupants, the class of room, and other pertinent information, only to find out that there are no rooms available at any of the hotels.

It was also known to allocate blocks of hotel rooms to centralized reservation systems, but if the number of rooms so allocated were used up, then the centralized reservation system would provide incorrect information if rooms were nevertheless available directly from the hotel's local reservation system. In one exemplary embodiment, the present invention overcomes these difficulties through a system for providing reservation data that comprises a reservation data system interface receiving reservation inventory data and inventory update data from two or more reservation systems. A master reservation system coupled to the reservation data system receives the reservation inventory data and stores the reservation inventory data in a database, and receives the inventory update data and updates the database with the inventory update data. A user interface system coupled to the master reservation system receives reservation request data and provides updated reservation inventory data in response to the reservation request data. The inventory update data is generated in real time as each reservation system is updated to reflect current inventory. In this exemplary embodiment, a person searching the centralized reservation system will only find information for hotels that have available rooms on the date of interest, and will not waste time performing an additional query at individual reservation systems where there are no available rooms, nor will a person be misled as to the availability of rooms at a hotel due to the exhaustion of a block of rooms allocated to the centralized reservation system.

The Applicants believe that the Examiner's construction of claims 1-25 as being anticipated by MacDonald or MacDonald in view of HRN is incorrect, because it reads elements

out of the claims. Federal Circuit precedent prohibits construing claims in a manner that reads elements out of the claim. *Texas Instruments v. U.S. Int'l Trade Comm'n*, 988 F.2d 1165, 1171 (Fed. Cir. 1993). Claim construction is reviewed de novo by the Board of Patent Appeals and Interferences. Further, it is axiomatic that “that which anticipates if earlier infringes if later.”

5 Thus, it needs to be determined de novo whether the system and method disclosed in MacDonald or MacDonald in view of HRN would infringe the proper construction of claims 1-25.

For example, claim 1 includes a system for providing reservation data that comprises a reservation data system interface receiving reservation inventory data and inventory update data from two or more reservation systems. A master reservation system coupled to the reservation  
10 data system receives the reservation inventory data and stores the reservation inventory data in a database, and receives the inventory update data and updates the database with the inventory update data. A user interface system coupled to the master reservation system receives reservation request data and provides updated reservation inventory data in response to the reservation request data. The inventory update data is generated in real time as each reservation  
15 system is updated to reflect current inventory.

In contrast, MacDonald merely discloses a hotel 1 18 and a hotel 2 18, and states at paragraph 0034 that the “reservation availability information is current based on information provided by cruise line companies in real time over the Internet,” and that the “technology for this capability, called SmartDecks<sup>TM</sup> technology is compatible with most widely used web  
20 browser software.” The Examiner argues in paper 19 at page 11 that “the vendor would inherently need some sort of vendor system in order to transmit said information,” but MacDonald explicitly teaches away from such a system at paragraph 0025, where it states that “[r]eservation takers, for example, owners or agents of hotels 18 or cruise ship lines 20, provide plans showing the arrangement of units for which reservations can be accepted to the website  
25 server 22. Developers use an application running on the website server 22 to interactively associate coordinates with each unit on an electronically represented version of the plan, to identify hot spots on which a user can position his mouse to obtain information concerning the unit. The developers also interactively associate coordinates with each unit to identify the location where an indicator may be displayed to indicate the availability state of the unit. The  
30 reservation takers also provide the website server with continuously updated information concerning the availability state of the units.” Thus, it is the owners or agents that provide

“continuously updated information concerning the availability state of the units” to the website server of MacDonald using the SmartDecks<sup>TM</sup> technology, which they access using only their web browser. Construction of claim 1 to cover the system disclosed in MacDonald is therefore improper, as MacDonald fails to disclose “a reservation data system interface receiving reservation inventory data and inventory update data from two or more reservation systems.”

Recognizing this failure, the Examiner further asserts in paper 19 at page 11 that “some sort of vendor system” is inherent in the system disclosed in MacDonald. This assertion is legally incorrect, and fails to provide the claim elements that are missing from MacDonald. “To establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (citations omitted). MacDonald itself teaches that “some sort of vendor system” is not required, because the owners or agents can use the SmartDecks<sup>TM</sup> technology, which they access using only their web browser. Thus, the Examiner’s assertion in paper 19 at page 11 that without “a vendor system the central website server would not be enabled to receive said continuously updated information concerning availability of units” is incorrect, at least to the extent that a system called SmartDecks<sup>TM</sup> is disclosed that apparently is hosted on website server 22 and that allows owners or agents to continuously update information by manually submitting that information using only a web browser. However, whether the disclosure of MacDonald is enabling of any possible claims is totally irrelevant as to whether the system disclosed in MacDonald would infringe the claims of the present application, when properly construed. The purpose of the enablement requirement is to “ensure[] that the public knowledge is enriched by the patent specification to a degree at least commensurate with the scope of the claims.” *Nat’l Recovery Techs., Inc. v. Magnetic Separation Sys.*, 166 F.3d 1190, 1196 (Fed. Cir. 1999). While not commenting on whether MacDonald would be enabling of any claims at all, Applicants agree with the Examiner that MacDonald fails to enable any of the pending claims in general, and in particular, two or more reservation systems that continuously update the central website. More importantly, though, the system disclosed in MacDonald simply would not infringe claim 1, properly

construed, and the Examiner's construction of the claim to cover the system disclosed in MacDonald is improper and should be reversed.

Claim 15 includes a method for providing reservation data that comprises storing reservation data reflecting the current status of available inventory from two or more properties from a room availability database from each of two or more reservation data systems in a database. A request for reservation data is received for one or more of the properties at a central interface. Reservation data is provided reflecting the current status of the property. The available inventory at each of the two or more properties can be independently modified from an interface other than the central interface, and the current status of the available inventory at each property reflects such independent modifications. MacDonald entirely fails to disclose "two or more reservation data systems," where the "available inventory at each of the two or more properties can be independently modified from an interface other than the central interface, and the current status of the available inventory at each property reflects such independent modifications." Instead, owners or agents use the SmartDecks<sup>TM</sup> technology, which they access manually access using only their web browser, to make changes to the database at the web server 22 of MacDonald. The system disclosed in MacDonald would not infringe claim 15, and the construction of claim 15 to cover the system disclosed in MacDonald is improper, and should be reversed.

Claims 23 through 25 depend from claim 15, and for the reasons discussed above, the construction of these claims that results in them reading on the system disclosed in MacDonald is improper, and should be reversed.

#### 4. Patentability of Group II (claims 2, 8, 13 and 17).

Sequence numbers for database updates allow the database to be rebuilt in the event of a "crash," and further allow databases to be replicated without the potential for loss of data and loss of synchronization between the replicated databases. When a number of feeder systems independently feed database updates to a central system, it is important to coordinate the sequence numbers, track the sequence numbers, or otherwise account for the fact that the sequence numbers come from different and unrelated sources.

Claim 2 depends from claim 1 and includes a monitoring system coupled to the master reservation system that stores each set of inventory update data and sequence number data

associated with the set of inventory update data. As an initial point, it is noted that the term “sequence” is not even used in MacDonald. Furthermore, in response to the Applicants drawing the Examiner’s attention to the failure of MacDonald to disclose such sequence numbers, such as to allow the database to be reconstructed, the Examiner states that “repeating this requesting act  
5 querying the most current reservation status allows the data to become current in the event an update was delayed.” This argument is completely non-responsive – if the database 30 of MacDonald crashes and must be rebuilt, any updates that were submitted by owners or agents using a web browser would be lost. No amount of repetition of the “requesting act querying the most current reservation status” would make information that was previously submitted by the  
10 owners and agents using a web browser and that was subsequently lost become available, and there would be no way of determining which information that was previously submitted by the owners and agents was lost without a sequence number. With a sequence number, it is possible to query each reservation in one exemplary embodiment to confirm that the latest update has been accounted for, or to obtain the missing updates. The Applicants agree with the Examiner  
15 that the system described in MacDonald fails to enable the invention of claim 2, and would fail to infringe claim 2 as properly construed. The construction of claim 2 to cover the system disclosed in MacDonald is improper, and should be reversed.

Likewise, claim 8 includes a method for providing reservation data that comprises storing reservation inventory data from two or more reservation data systems in a database. Inventory  
20 status update data is received from one or more of the reservation data systems in real-time as such inventory status update data is implemented in the associated reservation data system. The database is updated with the inventory status update data, and the inventory status update data is stored with an associate sequence number. For the reasons described above, the system disclosed in MacDonald would not infringe claim 8, and the construction of claim 8 to cover the  
25 system disclosed in MacDonald is improper.

Claim 13 depends from claim 8 and includes that receiving inventory status update data from one or more of the reservation data systems comprises receiving room price update data. The Applicants agree with the Examiner that MacDonald is non-enabling of the claims, as it discloses that room price update data can only be updated manually by an owner or agent  
30 through the SmartDecks™ web browser interface by changing every record, one at a time. The

construction of claim 13 to cover the system disclosed in MacDonald is improper, and should be reversed.

Claim 17 depends from claim 16 and includes that updating the database with status update data further comprises storing the status update data and a unique transaction sequence number associated with the status update data. The Applicants agree with the Examiner that MacDonald is non-enabling of the claims, as it fails to disclose that any sequence number is provided through the SmartDecks™ web browser interface. The construction of claim 17 to cover the system disclosed in MacDonald is improper, and should be reversed.

5. Patentability of Group III (claims 3 and 22).

While it is possible to interface a number of related systems to a centralized system, interfacing a number of unrelated systems to a centralized system is not typically possible, due to differences in communications formats, data formats, and other differences. In order to do so, it may be necessary to provide an interface system, either at each unrelated system (such as where the interface system converts the data from the remote system data format to the centralized system data format and then transmits it in a predetermined data transmission format) or at the centralized system (such as where the interface system receives the data in a predetermined data transmission format and then converts it from the remote system data format to the centralized system data format).

Claim 3 depends from claim 1 and includes a master reservation interface system coupled to the reservation data system interface and one of the reservation data systems that receives the inventory update data from the reservation data system and transmits the inventory update data to reservation data system interface. As previously discussed, MacDonald only discloses the use of SmartDecks™, which is apparently a system that allows an owner or agent to interface with web server 22 to manually provide updates using only a web browser. No reservation data system is disclosed, much less a master reservation interface system coupled to the reservation data system interface and one of the reservation data systems. Characterizing SmartDecks™ as a master reservation interface system coupled to the reservation data system interface and one of the reservation data systems is incorrect, because SmartDecks™ only provides manual input functionality. Applicants agree with the Examiner that the disclosure of MacDonald is non-



enabling as to claim 3. The construction of claim 3 to cover the system disclosed in MacDonald is improper, and should be reversed.

Claim 22 depends from claim 1 and includes a master reservation interface system coupled to the reservation data system interface and one of the reservation data systems that receives the inventory update data from the reservation data regardless of the source of the inventory update data system and that transmits the inventory update data to the reservation data system interface. A status update system provides status update data that includes room reservation data and rate change data to the master reservation interface system when the status update data becomes effective for the corresponding reservation system. The master reservation interface system transmits the status update to the master reservation system upon receiving the status update data from the status update system. The Applicants agree with the Examiner that MacDonald is non-enabling of the claims, as it fails to disclose a master reservation interface system, and as previously described, SmartDecks<sup>TM</sup> is only a web browser interface that requires manual entry of data for each record by an owner or agent. The construction of claim 22 to cover the system disclosed in MacDonald is improper, and should be reversed.

6. Patentability of Group IV (claims 4 and 9).

Hotel chains can be acquired, and can implement chain-wide modifications that affect all of the properties within the chain, such as changes to room classifications, frequent traveler program rewards, telephone numbers, addresses, or other data. Prior art centralized reservation systems required any changes to such chain data to be made for each property, and also did not allow for flow-through of changes from the chain management companies, such that the centralized data could be different from the actual chain data. Thus, a party searching for a reservation at a specific chain might not be provided with information for newly-acquired locations until weeks or months after the acquisition.

Claim 4 depends from claim 1 and includes that the master reservation system further comprises a chain system receiving chain modification data and updating the database with the chain modification data. The Examiner asserts that the disclosure of two hotels somehow meets this claim limitation, because there “is no indication that these two hotels are merely two separate hotels.” The Examiner apparently fails to appreciate that a cited reference must disclose each element of a claim in order to provide a basis for the rejection of the claim under 35 U.S.C.

102. It is not sufficient to use a reference to argue, as the Examiner does, that something is probable or possible, or that a certain thing may result from a given set of circumstances. *In re Robertson*, 169 F.3d at 745. Instead, the claimed elements must be explicitly disclosed by the reference, or the reference must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. *Id.* MacDonald fails to either explicitly disclose a chain modification system, or to make clear that it is necessarily present, as all updates are performed manually to individual reservation records through the SmartDecks™ web browser interface.

The Examiner further asserts that a “cruise line” search criteria in MacDonald provides this element. This argument is also flawed, as “searching” a database and “updating” a database are two completely different functions. One of ordinary skill in the art would recognize that the ability to search a database does not equate to the ability to update the database, for a number of reasons. For example, updates must be coordinated to prevent two parties from implementing contradictory changes, whereas searches can be performed simultaneously. Furthermore, as the Examiner notes, MacDonald is non-enabling of claim 4, as there must be a system disclosed that can receive chain modification data and that can update the database with the chain modification data in order to provide for updating the database with chain modification data. None of this is provided in MacDonald, which merely discloses the ability to search by a cruise line but does not disclose that the cruise line data can be updated by an owner or agent except through the SmartDecks™ web browser interface. If such an owner or agent wanted to modify the name of the cruise line after entering reservation data for every cabin that is available for a given cruise line, or make a similar chain-wide change, they would need to make changes manually to every record, one at a time. The construction of claim 4 to cover the system disclosed in MacDonald is improper, and should be reversed.

Claim 9 depends from claim 8 and includes that storing reservation inventory data from two or more reservation data systems in a database comprises storing hotel chain data. The Applicants agree with the Examiner that MacDonald is non-enabling of the claims, as it discloses that hotel chain data can only be updated manually by an owner or agent through the SmartDecks™ web browser interface by changing every record, one at a time. The construction of claim 9 to cover the system disclosed in MacDonald is improper, and should be reversed.

7. Patentability of Group V (claims 5 and 10).

Some changes to reservation system data are property-specific, such as when an individual property is acquired by a different party, changes its name, its address, its pricing structure, or implements other property-specific changes. Prior art centralized reservation systems required any changes to such property data to be made for each data record, and also did not allow for flow-through of changes from the property management companies, such that the centralized data could be different from the actual property data. Thus, a party searching for a reservation at a specific property might not be provided with correct information until weeks or months after the changes were implemented at the property.

Claim 5 depends from claim 1 and includes that the master reservation system further comprises a property system receiving property modification data and updating the database with the property modification data. The Examiner apparently failed to address the Applicants' arguments in regards to this claim, but the Applicants agree with the Examiner that MacDonald is non-enabling of the claims, as it discloses that property data can only be updated manually by an owner or agent through the SmartDecks<sup>TM</sup> web browser interface by changing every record, one at a time. The construction of claim 5 to cover the system disclosed in MacDonald is improper, and should be reversed.

Claim 10 depends from claim 8 and includes that storing reservation data from two or more reservation data systems in a database comprises storing property data. The Applicants agree with the Examiner that MacDonald is non-enabling of the claims, as it discloses that property data can only be updated manually by an owner or agent through the SmartDecks<sup>TM</sup> web browser interface by changing every record, one at a time. The construction of claim 10 to cover the system disclosed in MacDonald is improper, and should be reversed.

8. Patentability of Group VI (claims 6, 11, 19 and 20).

Some changes to reservation system data are rate-plan specific, such as when rates for certain classes of rooms are changed across a set of properties that include that class of rooms, when a group with negotiated rates such as the American Automobile Association negotiates new rates, or in other similar circumstances. Prior art centralized reservation systems required any changes to such rate plan data to be made for each data record, and also did not allow for

flow-through of changes from the property management companies, such that the centralized data could be different from the actual property data. Thus, a party searching for a reservation under a certain rate plan might not be provided with correct information until weeks or months after the changes were implemented.

5           Claim 6 depends from claim 1 and includes that the master reservation system further comprises a rate plan system receiving rate plan modification data and updating the database with the rate plan modification data. The Examiner apparently failed to address the Applicants' arguments in regards to this claim, but the Applicants agree with the Examiner that MacDonald is non-enabling of the claims, as it entirely fails to disclose the term "rate plan," and even if such  
10 rate plan data could be accommodated by the system disclosed by MacDonald, any rate plan data would only be capable of being updated manually by an owner or agent through the SmartDecks™ web browser interface by changing every record, one at a time. The construction of claim 6 to cover the system disclosed in MacDonald is improper, and should be reversed.

          Claim 11 depends from claim 8 and includes that storing reservation data from two or  
15 more reservation data systems in a database comprises storing rate plan data. The Applicants agree with the Examiner that MacDonald is non-enabling of the claims, as it entirely fails to disclose the term "rate plan," and even if such rate plan data could be accommodated by the system disclosed by MacDonald, any rate plan data would only be capable of being updated manually by an owner or agent through the SmartDecks™ web browser interface by changing  
20 every record, one at a time. The construction of claim 11 to cover the system disclosed in MacDonald is improper, and should be reversed.

          Claim 19 depends from claim 15 and includes that receiving the request for reservation data for one of the properties comprises receiving a request for rate plan data. The Applicants agree with the Examiner that MacDonald is non-enabling of the claims, as it not only fails to  
25 disclose the term "rate plan," but also fails to disclose being able to request rate plan data through the SmartDecks™ web browser interface. The construction of claim 19 to cover the system disclosed in MacDonald is improper, and should be reversed.

          Claim 20 depends from claim 15 and includes that receiving the request for reservation data for one of the properties comprises receiving a request for negotiated rate data. The  
30 Applicants agree with the Examiner that MacDonald is non-enabling of the claims, as it not only fails to disclose the term "negotiated," it also fails to disclose requesting negotiated rate data

through the SmartDecks™ web browser interface. The construction of claim 20 to cover the system disclosed in MacDonald is improper, and should be reversed.

9. Patentability of Group VII (claim 7).

Some changes to reservation system data are distribution-channel specific, such as when rates for certain classes of rooms are changed as a function of a distribution channel, such as a travel agency, a referring website, or in other similar circumstances. Prior art centralized reservation systems required any changes to such distribution channel data to be made for each data record, and also did not allow for flow-through of changes from a distribution channel, such that the centralized data could be different from the actual property data. Thus, a party searching for a reservation under a certain distribution channel might not be provided with correct information until weeks or months after the changes were implemented.

Claim 7 depends from claim 1 and includes that the master reservation system further comprises a distribution channel system receiving distribution channel modification data and updating the database with the distribution channel modification data. The Examiner apparently failed to address the Applicants' arguments in regards to this claim, but the Applicants agree with the Examiner that MacDonald is non-enabling of the claims, as it discloses that distribution channel data can only be updated manually by an owner or agent through the SmartDecks™ web browser interface by changing every record, one at a time. The construction of claim 7 to cover the system disclosed in MacDonald is improper, and should be reversed.

10. Patentability of Group VIII (claims 12, 16 and 21).

Another shortcoming of the prior art was accommodating changes to reservations, such as where rooms that had been reserved later became available, such as due to the cancellation of the reservation. Prior art centralized reservation systems required any changes due to such cancellations to be made for each data record, and also did not allow for flow-through of changes from the remote reservation systems, such that the centralized data could be different from the actual reservation data. Thus, a party searching for a reservation might be led to believe that the property had no vacancies, such as where a block of rooms were reserved for reservations made through the centralized website but where such reservations were subsequently cancelled by the guest directly contacting the property.

Claim 12 depends from claim 8 and includes that receiving inventory status update data from one or more of the reservation data systems comprises receiving room availability update data that indicates that a room is available that had previously been indicated as being reserved. The Applicants agree with the Examiner that MacDonald is non-enabling of the claims, as it fails to disclose how to change the status of a room from being unavailable to a status of being available through the SmartDecks™ web browser interface. The construction of claim 12 to cover the system disclosed in MacDonald is improper, and should be reversed.

Claim 16 depends from claim 15 and includes that storing reservation data reflecting the current status of available inventory from two or more properties from a room availability database from each of two or more reservation data systems in a database further comprises updating the database with status update data reflecting the availability of previously unavailable inventory. The Applicants agree with the Examiner that MacDonald is non-enabling of the claims, as it fails to disclose how to change the status of a room from being unavailable to a status of being available through the SmartDecks™ web browser interface. The construction of claim 16 to cover the system disclosed in MacDonald is improper, and should be reversed.

Claim 21 depends from claim 3 and includes that the reservation inventory data includes room availability data for each of the available rooms at each property managed by each of the two or more reservation systems, and that the inventory update data includes rented room data at one of the properties that reflects rooms that were previously indicated as being available at that property and which have since become unavailable. The Applicants agree with the Examiner that MacDonald is non-enabling of the claims, as it fails to disclose how to change the status of a room from being unavailable to a status of being available through the SmartDecks™ web browser interface. The construction of claim 21 to cover the system disclosed in MacDonald is improper, and should be reversed.

## 11. Summary

For the reasons set forth above, Appellant submits that the Examiner's construction of the claims is improper on the grounds that it reads elements out of the claims, and that Appellant's properly construed claimed invention is indeed novel and unobvious over the applied references and the art of record.

Accordingly, the Examiner's rejections must be REVERSED, and claims 1-13, 15-17, and 19-25 must be allowed.

IX. ARGUMENTS ((37 C.F.R. § 1.192(c)(8 (iv)))  
ARGUMENT: REJECTIONS UNDER 35 U.S.C. 103

5           1.     HRN

HRN discloses a system for making reservations at a plurality of hotels or other properties in which reservation information from the properties is provided through a central website, but where no real-time update is made to the individual reservation systems of the plurality of hotels or other properties. As such, a person searching the website might select a hotel only to find out that there is no availability at the hotel on the desired date. Accordingly, a person searching the website might spend a considerable amount of time selecting properties that do not have any available rooms on a given date, which would significantly increase the amount of time required to make a reservation.

          2.     Patentability of Group IX (claims 14 and 18).

15           Although systems for offering distressed inventory were known in the prior art, such systems were essentially remote reservation systems, or interfaced independently with the remote reservation systems using prior art systems having the problems previously described. Thus, any information at a centralized reservation system that included both distressed and non-distressed inventory suffered from the noted problems, such as where the distressed inventory was no longer available but would turn up in a search at the centralized reservation system, or where the distressed inventory would not be provided to the centralized reservation system until weeks or months after it was available directly from the distressed inventory provider.

25           Claim 14 depends from claim 8 and includes that receiving inventory status update data from one or more of the reservation data systems comprises receiving distressed inventory data. The Applicants agree with the Examiner that MacDonald in view of HRN is non-enabling of the claims, as it discloses that distressed inventory data can only be updated manually by an owner or agent through the SmartDecks<sup>TM</sup> web browser interface by changing every record, one at a time. The construction of claim 14 to cover the system disclosed in MacDonald in view of HRN is improper, and should be reversed.

Claim 18 depends from claim 15 and includes that receiving the request for reservation data for one or more of the properties comprises receiving a request for distressed inventory. The Applicants agree with the Examiner that MacDonald in view of HRN is non-enabling of the claims, as it fails to disclose receiving a request for distressed inventory data through the SmartDecks™ web browser interface. The construction of claim 18 to cover the system disclosed in MacDonald in view of HRN is improper, and should be reversed.

### 3. Summary

For the reasons set forth above, Appellant submits that the Examiner's construction of the claims is improper on the grounds that it reads elements out of the claims, and that Appellant's properly construed claimed invention is indeed novel and unobvious over the applied references and the art of record.

Accordingly, the Examiner's rejections must be REVERSED, and claims 14 and 18 must be allowed.

## X. APPENDIX OF CLAIMS (37 C.F.R. § 1.192(c)(9))

The text of the claims involved in the appeal are as follows:

1. A system for providing reservation data comprising:

a reservation data system interface receiving reservation inventory data and inventory update data from two or more reservation systems; and

a master reservation system coupled to the reservation data system, the master reservation system receiving the reservation inventory data and storing the reservation inventory data in a database, the master reservation system receiving the inventory update data and updating the database with the inventory update data;

a user interface system coupled to the master reservation system, the user interface system receiving reservation request data and providing updated reservation inventory data in response to the reservation request data; and

wherein the inventory update data is generated in real time as each reservation system is updated to reflect current inventory.



2. The system of claim 1 further comprising a monitoring system coupled to the master reservation system, the monitoring system storing each set of inventory update data and sequence number data associated with the set of inventory update data.

3. The system of claim 1 further comprising a master reservation interface system coupled to the reservation data system interface and one of the reservation data systems, the master reservation interface system receiving the inventory update data from the reservation data system and transmitting the inventory update data to reservation data system interface.

4. The system of claim 1 wherein the master reservation system further comprises a chain system receiving chain modification data and updating the database with the chain modification data.

5. The system of claim 1 wherein the master reservation system further comprises a property system receiving property modification data and updating the database with the property modification data.

6. The system of claim 1 wherein the master reservation system further comprises a rate plan system receiving rate plan modification data and updating the database with the rate plan modification data.

7. The system of claim 1 wherein the master reservation system further comprises a distribution channel system receiving distribution channel modification data and updating the database with the distribution channel modification data.

8. A method for providing reservation data comprising:  
storing reservation inventory data from two or more reservation data systems in a database;

receiving inventory status update data from one or more of the reservation data systems  
5 in real-time as such inventory status update data is implemented in the associated reservation data system;

updating the database with the inventory status update data; and  
storing the inventory status update data with an associate sequence number.

9. The method of claim 8 wherein storing reservation inventory data from two or more reservation data systems in a database comprises storing hotel chain data.

10. The method of claim 8 wherein storing reservation data from two or more reservation data systems in a database comprises storing property data.

11. The method of claim 8 wherein storing reservation data from two or more reservation data systems in a database comprises storing rate plan data.

12. The method of claim 8 wherein receiving inventory status update data from one or more of the reservation data systems comprises receiving room availability update data that indicates that a room that had previously been indicated as being reserved.

13. The method of claim 8 wherein receiving inventory status update data from one or more of the reservation data systems comprises receiving room price update data.

14. The method of claim 8 wherein receiving inventory status update data from one or more of the reservation data systems comprises receiving distressed inventory data.

15. A method for providing reservation data comprising:

storing reservation data reflecting the current status of available inventory from two or more properties from a room availability database from each of two or more reservation data systems in a database;

5 receiving a request for reservation data for one or more of the properties at a central interface;

providing reservation data reflecting the current status of the property; and

wherein the available inventory at each of the two or more properties can be independently modified from an interface other than the central interface, and wherein the  
10 current status of the available inventory at each property reflects such independent modifications.

16. The method of claim 15 wherein storing reservation data reflecting the current status of available inventory from two or more properties from a room availability database from each of two or more reservation data systems in a database further comprises updating the database with status update data reflecting the availability of previously unavailable inventory.

17. The method of claim 16 wherein updating the database with status update data further comprises storing the status update data and a unique transaction sequence number associated with the status update data.

18. The method of claim 15 wherein receiving the request for reservation data for one or more of the properties comprises receiving a request for distressed inventory.

19. The method of claim 15 wherein receiving the request for reservation data for one of the properties comprises receiving a request for rate plan data.

20. The method of claim 15 wherein receiving the request for reservation data for one of the properties comprises receiving a request for negotiated rate data.

21. The system of claim 3 wherein the reservation inventory data includes room availability data for each of the available rooms at each property managed by each of the two or

more reservation systems, and where the inventory update data includes rented room data at one of the properties that reflects rooms that were previously indicated as being available at that property and which have since become unavailable.

22. The system of claim 1 further comprising:

a master reservation interface system coupled to the reservation data system interface and one of the reservation data systems, the master reservation interface system receiving the inventory update data from the reservation data regardless of the source of the inventory update data system and transmitting the inventory update data to the reservation data system interface;

a status update system providing status update data that includes room reservation data and rate change data to the master reservation interface system when the status update data becomes effective for the corresponding reservation system; and

wherein the master reservation interface system transmits the status update to the master reservation system upon receiving the status update data from the status update system.

23. The method of claim 15 wherein storing reservation data reflecting the current status of available inventory from two or more properties from two or more reservation data systems in a database comprises:

receiving status update data at a local property reservation system when a room at a property has been reserved;

transmitting the status update data to the database; and

updating a central database to decrease the number of available rooms for the property.

24. The method of claim 15 wherein storing reservation data reflecting the current status of two or more properties from two or more reservation data systems in a database comprises:

receiving status update data at a local property reservation system when a rate plan at a property has been changed;

transmitting the status update data to the database; and

updating a central database to change the rate plan for each of the rooms for the property.

25. The method of claim 15 wherein storing reservation data reflecting the current status of two or more properties from two or more reservation data systems in a database comprises:

- receiving status update data at a hotel chain reservation system when distribution channel
- 5 data for a hotel chain has been changed;
- transmitting the status update data to the database; and
- updating a central database to change the distribution channel data for each of two or more properties in the hotel chain.

#### X. OTHER MATERIAL THAT APPELLANT CONSIDERS NECESSARY OR DESIRABLE

See Appendix:

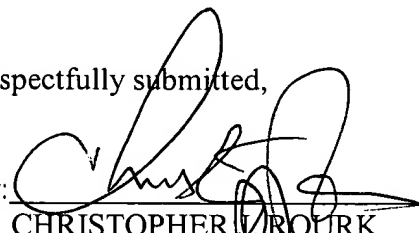
- A. MacDonald - U.S. application No. 2002/0099576 A1.
- B. HRN

If any applicable fee or refund has been overlooked, the Commissioner is hereby authorized to charge any fee or credit any refund to the deposit account of Akin, Gump, Strauss, Hauer & Feld, L.L.P., No. 01-0657.

4/9/03  
(Date)

Respectfully submitted,

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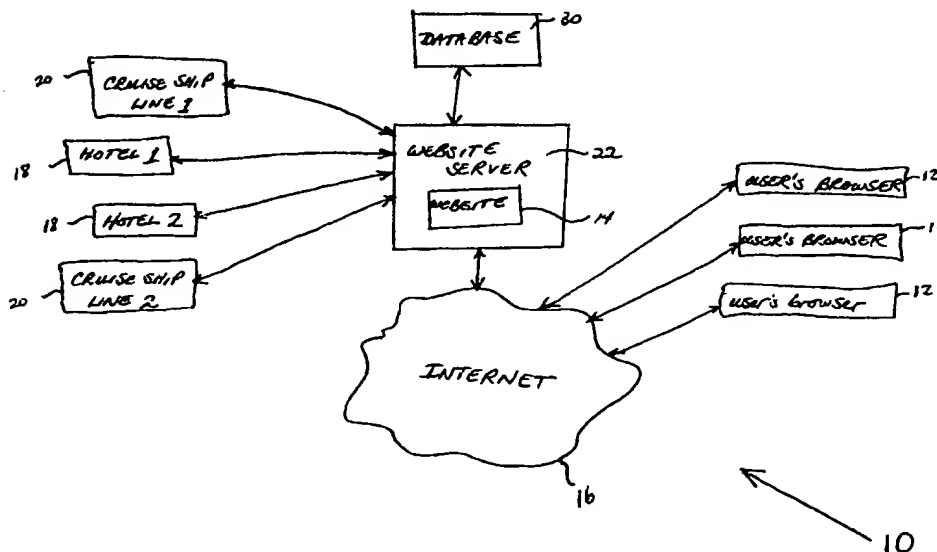
US 20020099576A1

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(US); **Bradford Melseles**, Natick, MA  
(US)(51) Int. Cl.<sup>7</sup> ..... **G06F 17/60**(52) U.S. Cl. .... **705/6; 705/5**

(57)

**ABSTRACT**Correspondence Address:  
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Systems and methods are provided for managing reservations, e.g., reservations for units in lodging facilities such as cabins on cruise ships and rooms or suites in hotels, using the Internet. A person wishing to make a reservation can easily access information regarding the availability of units (e.g., cabins or rooms) during a particular time period by visiting a website that includes plans showing various areas of a place of accommodation (e.g., a deck of a ship or floor of a hotel).

(21) Appl. No.: **09/766,945**(22) Filed: **Jan. 22, 2001**

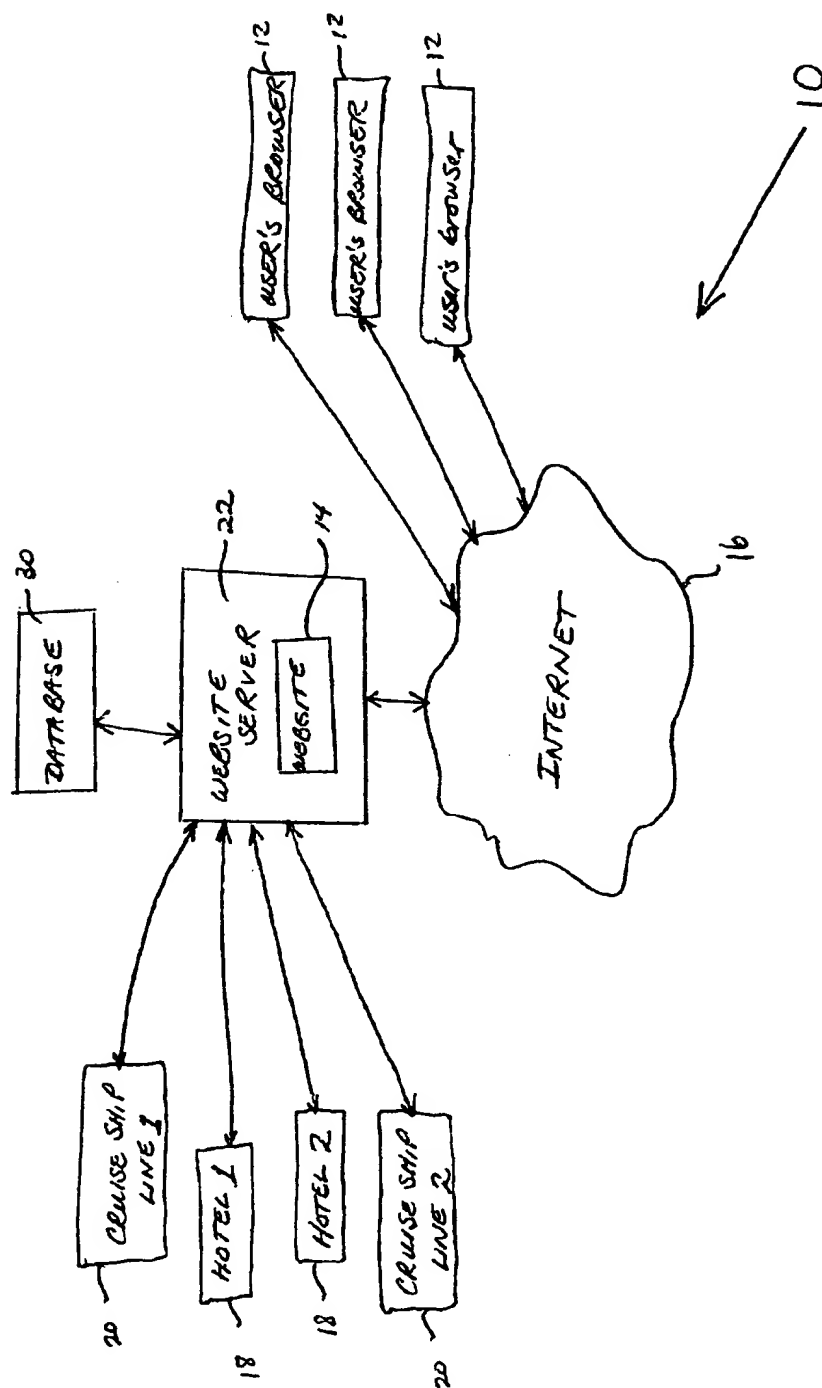


FIG. 1



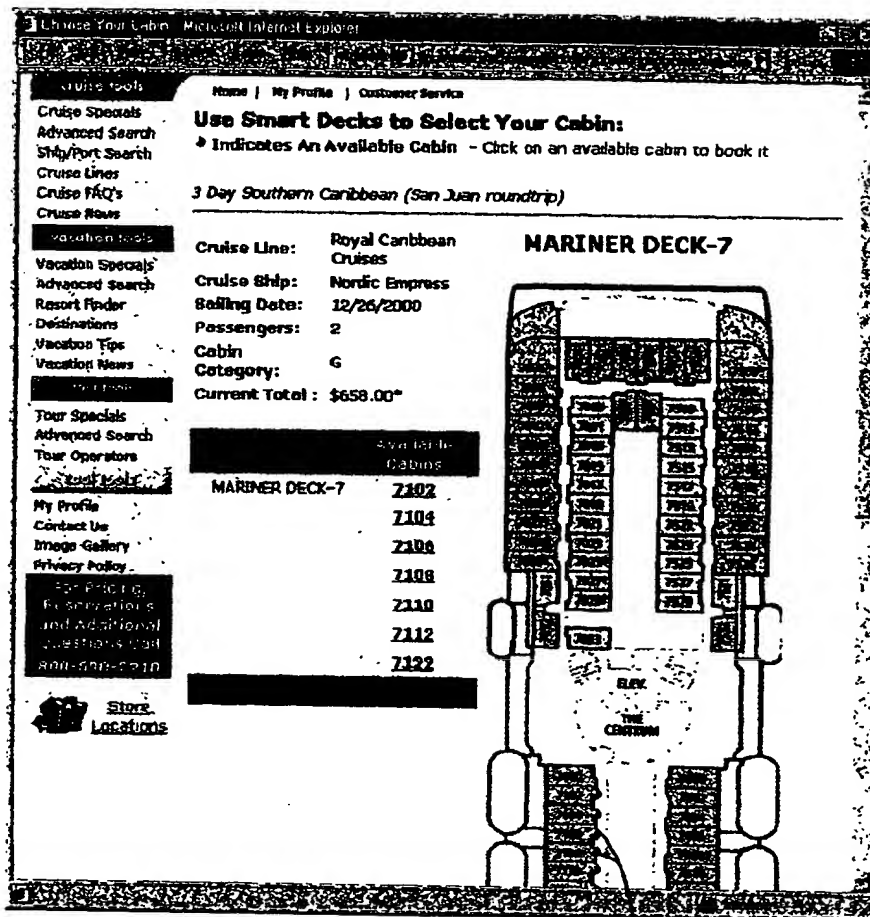


FIG. 2 24

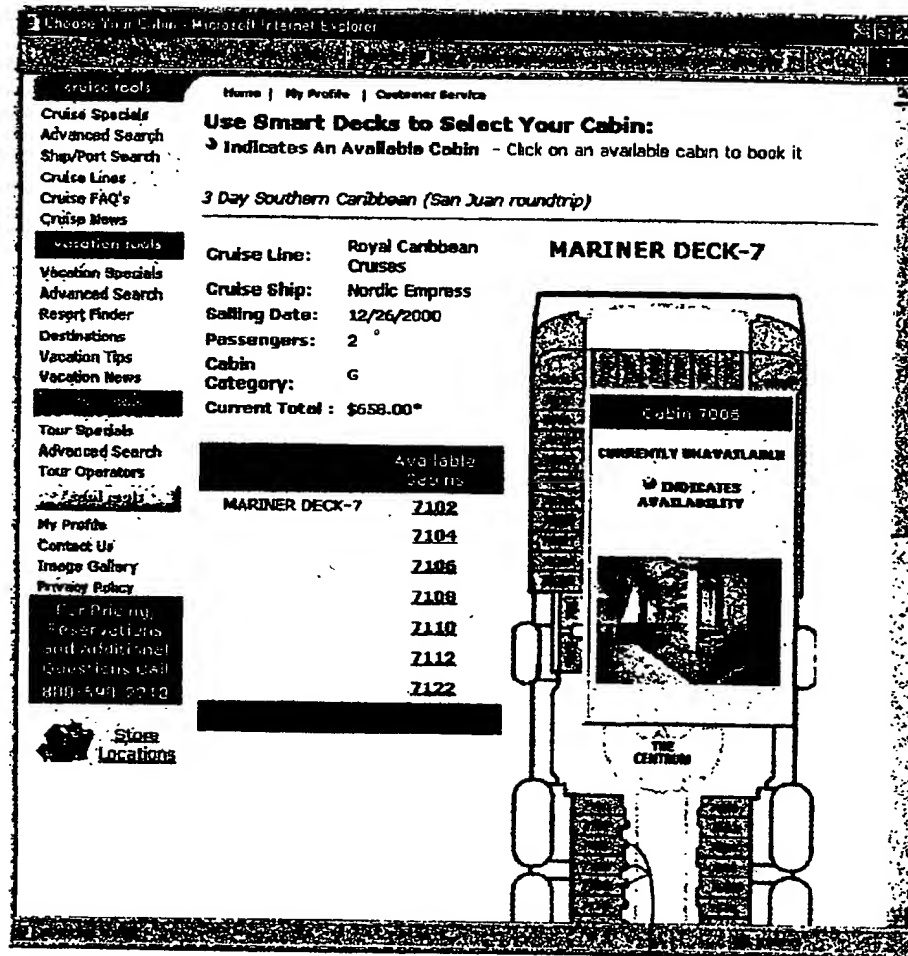


FIG. 3

24

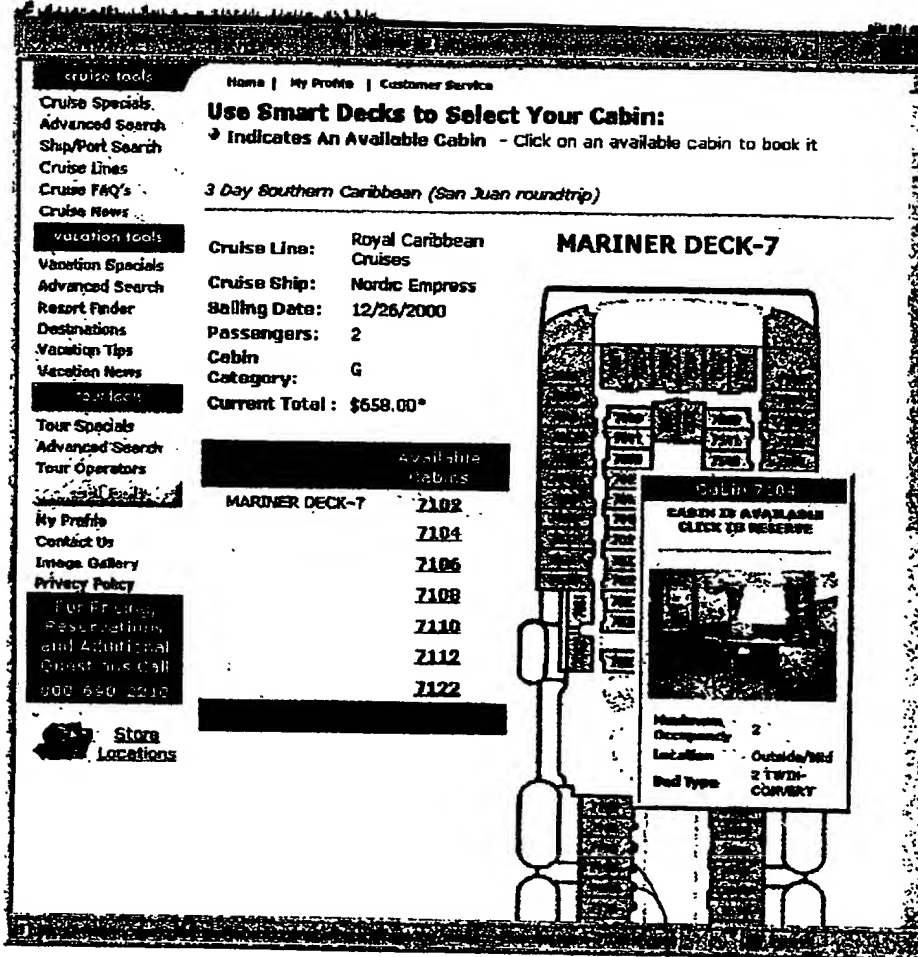


FIG. 4

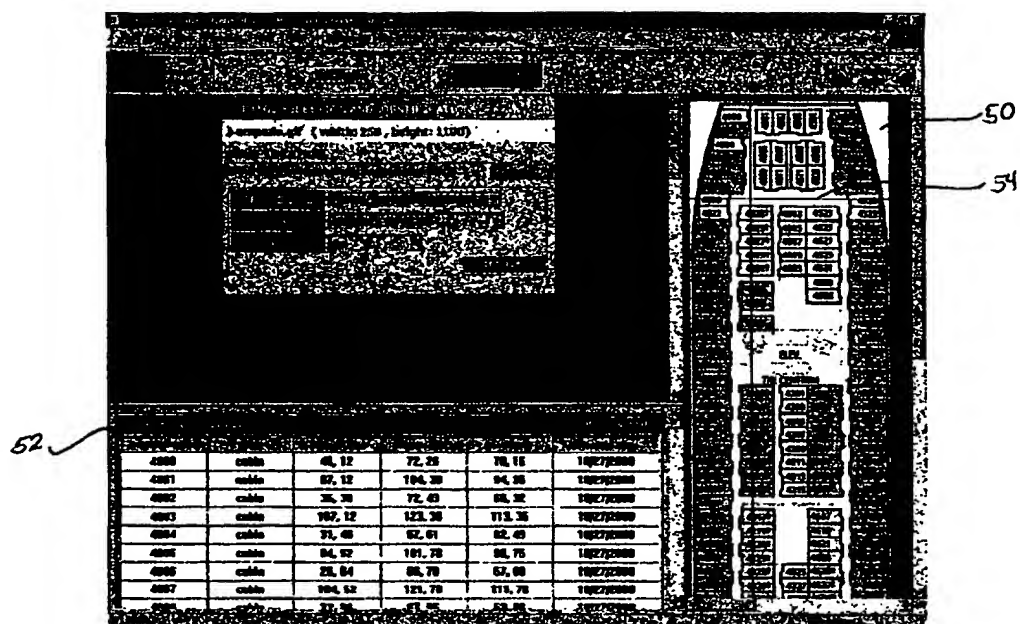


FIG. 5

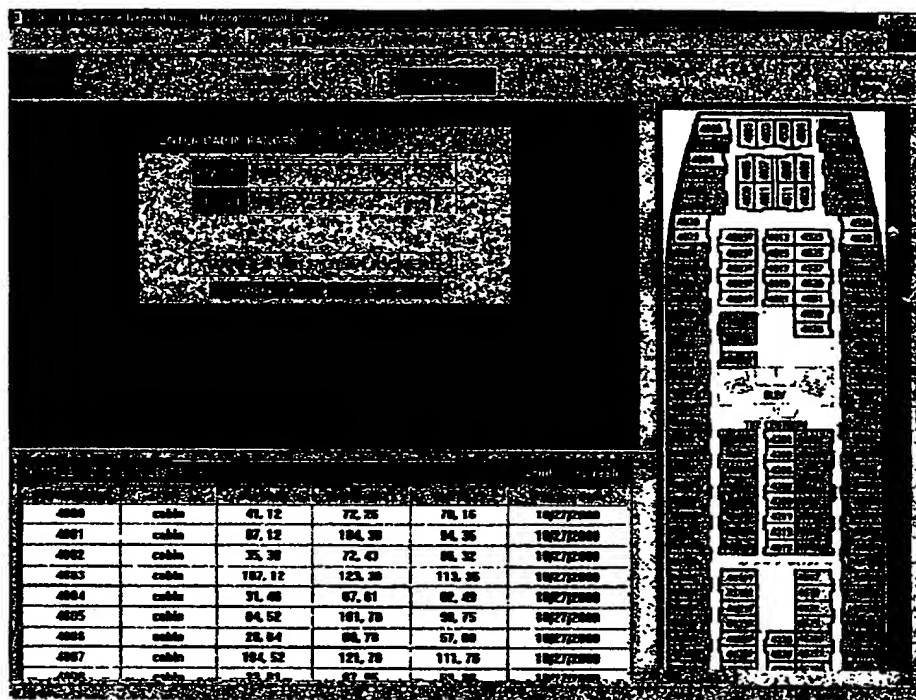


FIG. 6

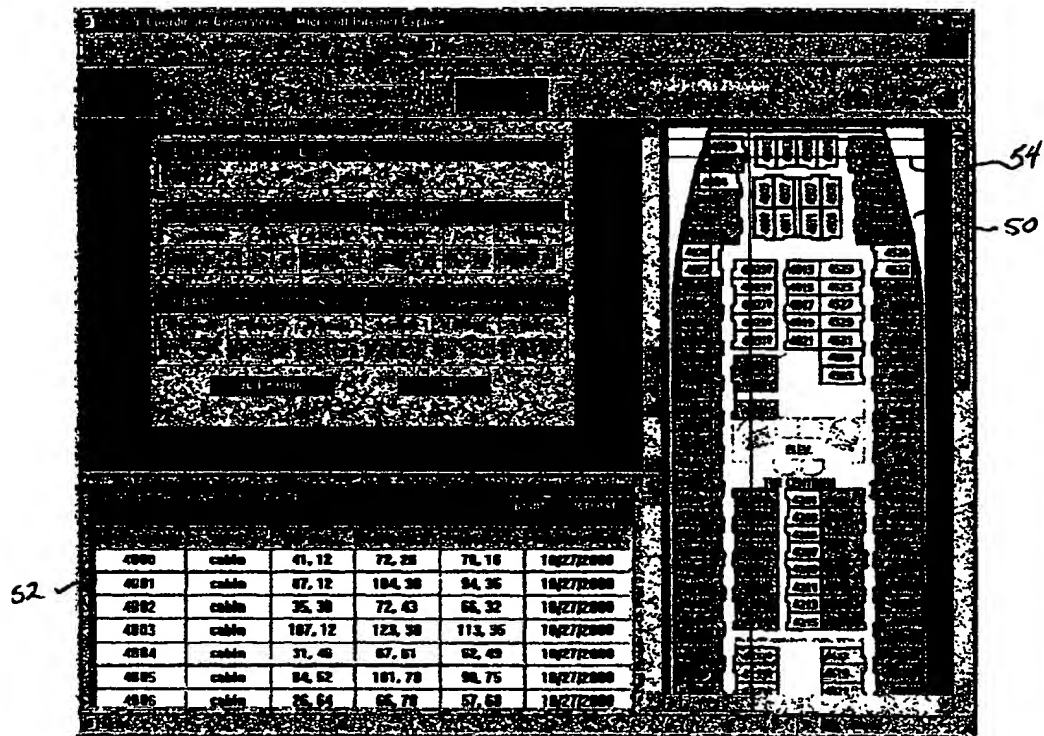


FIG. 7

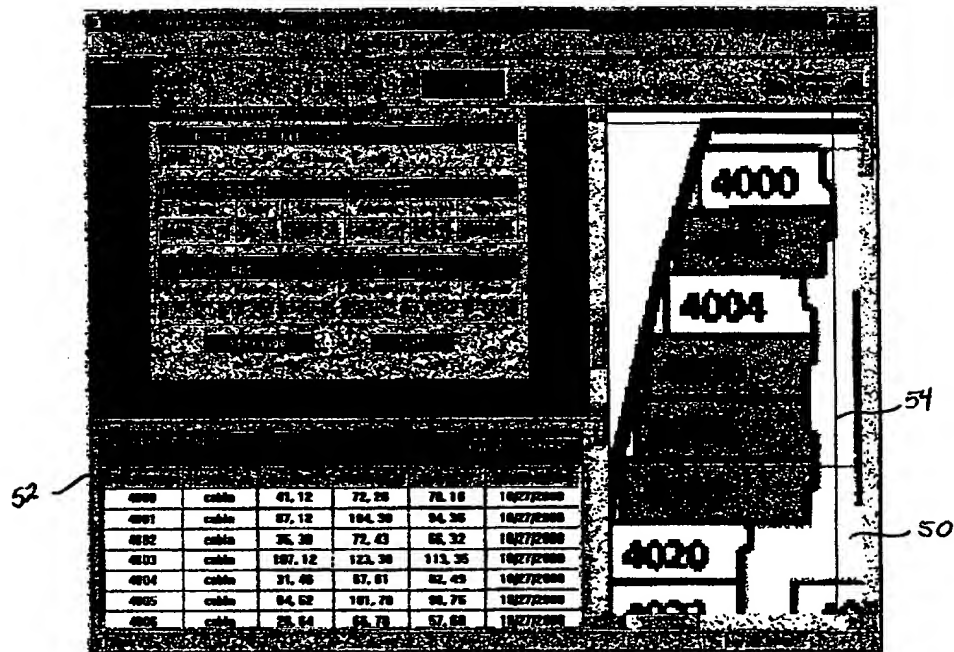


FIG. 8

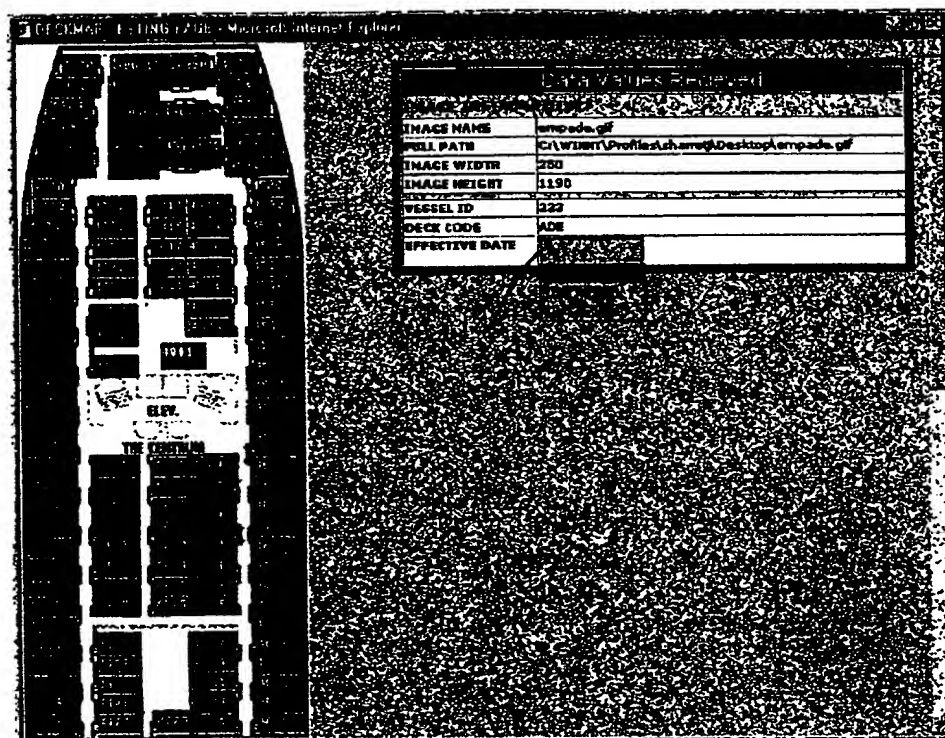


FIG. 9



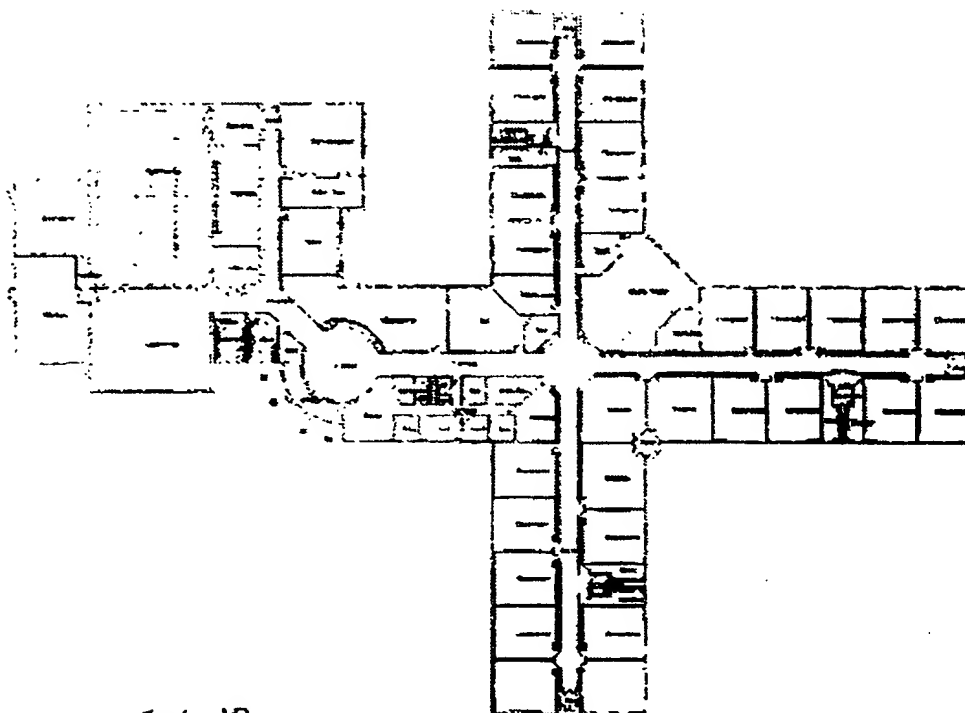


FIG. 10

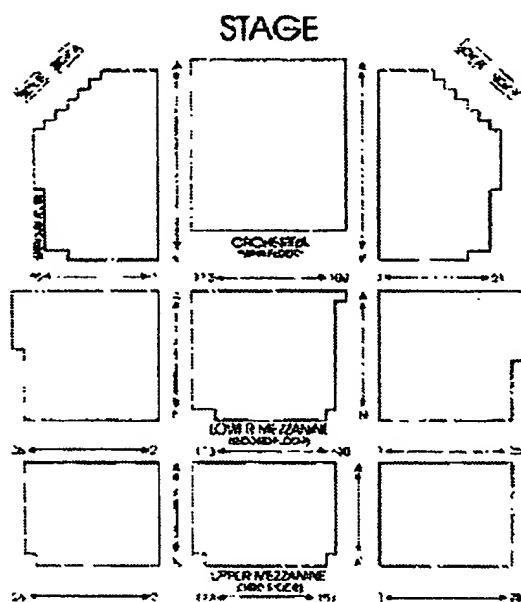


FIG. 11

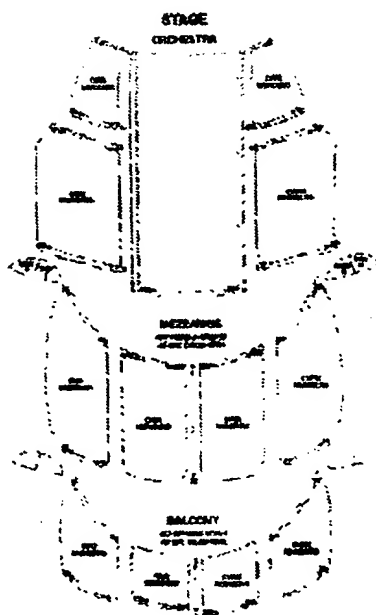


FIG. 11A

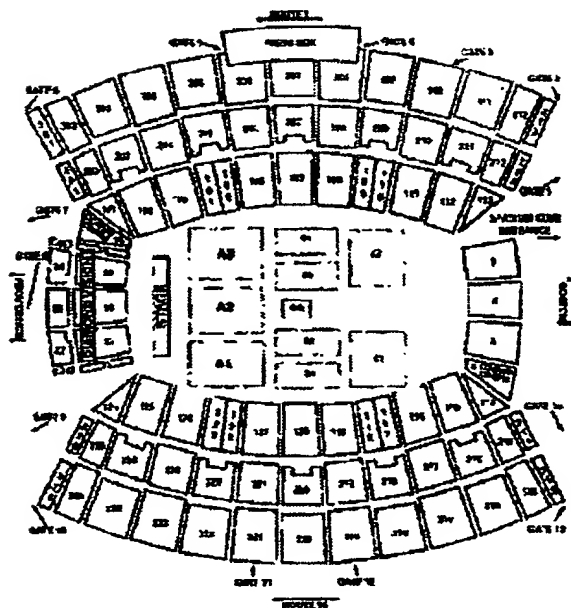


FIG. 12

## MANAGING RESERVATIONS

## TECHNICAL FIELD

[0001] This invention relates to managing reservations.

## BACKGROUND

[0002] When a person wishes to make a reservation for travel accommodations, for example a cabin on a cruise ship or a room in a hotel, generally the person consults a travel agent or the owner of the accommodations and discusses the nature of the cabins or rooms that are available during a given time period. This may be done in person, but is often done over the telephone. In some cases, the person can use the Internet to consult a hotel's website when making hotel reservations and obtain some information regarding availability. This information is typically in the form of a list of the types of rooms that are available during the time period. If the person wishes to obtain information on the availability of units in a number of different ships or hotels, it is generally necessary for the person or the travel agent to contact each accommodation provider individually.

[0003] In the case of reserving seats in a theatre or stadium, the person making a reservation may be able to look at a diagram of the seating arrangement and discuss the desirability of available seats with a reservation-taker.

[0004] In the case of cruise ship reservations, each ship has a number of decks, each deck has different types of cabins that are arranged in a particular configuration, and each ship in a fleet may have an arrangement of decks and cabins that is different from other ships in the fleet. The ships of different fleets also typically have different arrangements of decks and cabins. As a result, if a traveler wishes to compare various cruise ships and consider different possible travel dates, many options will need to be investigated and presented to the traveler by the person managing the reservations for the cruise line.

## SUMMARY

[0005] The present invention provides systems and methods for managing reservations, e.g., reservations for units in lodging facilities such as cabins on cruise ships and rooms or suites in hotels, using the Internet. The invention allows a person wishing to make a reservation to easily access information regarding the availability of units (e.g., cabins or rooms) during a particular time period by visiting a website that includes plans showing various areas of a place of accommodation (e.g., a deck of a ship or floor of a hotel). Because the user can view a plan of the place of accommodation, the user can easily compare the relative desirability of various units, for example by observing how close the unit is to an elevator or shared bathroom. In some implementations, the website includes plans for many different places of accommodation having different configurations of units. The invention also allows a person in charge of managing reservations to provide travelers (or others wishing to make reservations) with easy access to continuously updated information concerning availability of units. In some implementations, the website provides the user with information regarding the cost and features of particular units.

[0006] In one aspect, the user interactively enters a time period of interest and then views a plan showing an area of

the place of accommodation (e.g., a deck of a ship or floor of a hotel) that includes an indicator, displayed in the vicinity of each of the units, showing whether that unit is available during the time period. In some implementations, by clicking on a particular unit, the user can obtain information on the features of that unit, which may include a graphic image of a portion of the unit.

[0007] In one aspect, the invention features a method including (a) displaying a plan of units located at a place of accommodation, (b) receiving from a user an interactive indication of a calendar period of interest, (c) receiving continually updated information about the availability for booking, during specified calendar periods, of units displayed on the plan, and (d) using the updated information to display in the vicinity of units on the plan an indicator of the availability state of units during the calendar period of interest. Implementations of this aspect of the invention may include one or more of the following features. The method includes displaying one indicator per unit. The display is on a web browser. The place of accommodation includes a lodging facility, for example a cruise ship or hotel. The units include cabins on a cruise ship, or rooms or suites in a hotel. The plan includes an image of a deck of a cruise ship, or an image of a floor of a hotel. The method further includes displaying a graphic image of the interior of a unit when the user moves a pointer over the unit on the plan. The method further includes displaying textual information relating to features of a unit when the user moves a pointer over the unit on the plan. The plan includes a seating arrangement. The seating arrangement is in a theatre, stadium or restaurant.

[0008] In another aspect, the invention features a method including (a) obtaining at least one plan of units for each of multiple places of accommodation, the different places of accommodation having different configurations, (b) making the plans of units available through a publicly accessible electronic network, (c) receiving continually updated information concerning the availability state of each of the units displayed on each plan during specified time periods, and (d) making the updated information available through the network so that it can be accessed by a user while viewing any of the plans of units.

[0009] Implementations of this aspect of the invention may include one or more of the following features. The network includes the Internet. The places of accommodation include lodging facilities. The method further includes using the updated information to display an indicator in the vicinity of units on the plan of the availability state of units during a calendar period of interest. The plans of units include electronic representations of cruise ship decks.

[0010] In a further aspect, the invention features a method including (a) obtaining an electronically represented plan of units for a place of accommodation, (b) displaying the plan, and (c) enabling a developer to interactively associate coordinates with each unit of the plan, to identify hot spots on which a user can position a pointer to obtain information associated with each unit. The information may include a graphic image of the interior of a unit, and/or textual information relating to features of a unit, and may be provided in a popup window.

[0011] In yet another aspect, the invention features a method including (a) displaying, on a web browser, a plan of units located at a lodging facility, (b) receiving an

interactive indication from a user of a calendar period of interest, (c) receiving continually updated information about the availability for booking of units displayed on the plan during specified calendar periods, and (d) using the updated information to display one indicator per unit in the vicinity of units on the plan of the availability state of units during the calendar period of interest.

[0012] The invention also features a method including displaying a plan of units located at a place of accommodation, and displaying a graphic image of the interior of a unit when a user moves a pointer over the unit on the plan.

[0013] In another aspect, the invention features a method including (a) at a server, storing plans of accommodations available at different locations, (b) receiving at the server continually updated information about the availability of the accommodations at the different locations during defined time periods, and (c) making the plans and the continually updated information available on a publicly accessible communication network to customers for the accommodations.

[0014] The invention also features a web page, including a plan of units of accommodation at a location, and indicators on the plan in the vicinity of units of the accommodation, the indicators indicating the availability states of the units.

[0015] The phrase "place of accommodation", as used herein, includes any facility that offers a number of units (e.g., seats, rooms, cabins or other spaces) that are in the same vicinity but have different individual locations, and that can be individually reserved for a specified time period. At least some of the units differ from other units, e.g., in price and/or desirability.

[0016] The term "lodging facility" refers to any place that provides overnight accommodation, including cruise ships, hotels and campgrounds.

[0017] The term "hotel", as used herein, includes lodging facilities that offer rooms or suites at daily or weekly rates, including motels, motor inns, bed and breakfasts, inns, and condominiums available on a short-term rental basis.

[0018] The term "publicly accessible", as used herein, means accessible to at least a portion of the public, for example to travel agents, or to the public at large.

[0019] Other features and advantages of the invention will be apparent from the description and drawings, and from the claims.

#### DESCRIPTION OF DRAWINGS

[0020] FIG. 1 is a schematic block diagram of a system for managing reservations.

[0021] FIGS. 2-4 are screenshots of webpages that are viewed by a user checking the availability of cabins on a cruise ship.

[0022] FIGS. 5-9 are screenshots of an application used by a developer to produce webpages such as those shown in FIGS. 2-4.

[0023] FIG. 10 is a plan of a hotel floor.

[0024] FIGS. 11 and 11A are plans showing seating arrangements in a theater, and FIG. 12 is a plan showing a seating arrangement in a stadium.

#### DETAILED DESCRIPTION

[0025] FIG. 1 shows a system 10 by which reservation makers are able to check on the availability of units at a place of accommodation over the Internet. Using a standard web browser 12, e.g., Internet Explorer, users (reservation makers) can connect to a website 14 (operated by a website server 22) via the Internet 16. The website server has application software programmed to implement reservation managing functions, examples of which will be described below with reference to FIGS. 2-4. Reservation takers, for example, owners or agents of hotels 18 or cruise ship lines 20, provide plans showing the arrangement of units for which reservations can be accepted to the website server 22. Developers use an application running on the website server 22 to interactively associate coordinates with each unit on an electronically represented version of the plan, to identify hot spots on which a user can position his mouse to obtain information concerning the unit. The developers also interactively associate coordinates with each unit to identify the location where an indicator may be displayed to indicate the availability state of the unit. The reservation takers also provide the website server with continuously updated information concerning the availability state of the units. This information is also associated with the units on the electronically represented version of the plan, and indicators are provided next to individual units to provide a visual indication of the availability state of the units when the plan is displayed on a webpage on the website.

#### [0026] Using the System to Check Availability

[0027] When a user visits the website 14, he is prompted to enter a calendar period of inquiry (dates for which the user wishes availability information). Once a calendar period of inquiry specification is received from the user's web browser, a deck plan diagram is rendered, as shown in FIG. 2. The deck plan diagram displays the location of all the deck's cabins and adds a special notation (e.g., a red light 24, as shown in FIG. 2) to each cabin representation that corresponds to a cabin that is available for reservation. The notation is typically an indicator that blinks different colors, so as to contrast with the plan and be readily visible regardless of the background color.

[0028] In the example shown in FIG. 2, the calendar period of inquiry for cabin reservation availability is "Sailing Date: 12/26/2000." This date (the date indicated by the user's web browser) has been compared by the web server 22 against information provided by the appropriate cruise ship line 20 to generate the schematic diagram of the "Mariner Deck" of Royal Caribbean Cruise Line's Nordic Empress. The schematic diagram is preloaded with a graphical indication of reservation availability for each cabin shown. The dynamic graphical indication of reservation availability is compatible with widely used web browser software and is based on real time data received from respective cruise line reservation systems. For example, the software system of a cruise line is issued an information request by the website server 22, requesting the most current reservation availability status for the cabins shown on the "Mariner Deck" for use in this single web page rendering. Communication between the website server and the software system of the cruise line is generally over a point-to-point connection, using a TCP/IP protocol.

[0029] The display reports additional reservation information and descriptive information for any shown cabin in

response to a request from the web browser user. The reports are made by continually updating the display with a cabin availability status message and cabin description message in the vicinity of the web browser user's indicated cabin on the diagram.

[0030] In the example shown in FIG. 3, cabin #7006 in the upper left corner of the Mariner Deck diagram was selected by the web browser user's mouse input device. This action causes the pop-up display window headed "Cabin 7006" to appear in the web browser window. The window indicates that cabin 7006 is currently unavailable for reservation. This functionality is based on the information that was pre-loaded in the user's web browser in the previous step. This step does not require the user's computer to make any additional information requests over the Internet to replace or update availability information—all the required information was provided by the time the "Example Step 1" screen (shown above) was rendered on the user's computer. As the user moves his mouse input device over the graphical representation of different cabins, new pop-up windows in the vicinity of the "moused-over" cabins are automatically generated to reflect the reservation availability of the newly indicated cabin.

[0031] Web browser users may surmise what cabins in the display are available for reservation by noting which cabin representations include flashing dots. When the position of the browser user's mouse input device activates one of these specially-marked cabins, then the resulting pop-up window confirms reservation availability, and shows additional information. Such is the case for "Cabin 7104" in FIG. 4.

[0032] The web browser user may choose to continue with a reservation with respect to an available cabin by clicking on the cabin representation. At this point, the reservation request is sent from the user's web browser to reservation software over the Internet. The reservation request is recorded by the reservation software and used to generate a new page that is sent back to the user's web browser. The new page continues the cruise vacation reservation process. At this point, the cabin selection part of the cruise vacation reservation process is over and the user will complete the remainder of the process in a conventional manner.

[0033] After the user has selected a particular cabin, the user is asked for passenger names. When the user has entered this information, the web server places a 15 minute hold on the cabin, making it unavailable to other users. After the reservation process has been completed, a message is sent by the web server to the software system of the cruise line, and the availability information on the website is updated.

[0034] Thus, the web pages shown in FIGS. 2-4 provide the web browser user with a highly intuitive, graphical, information-rich tool for selecting a cabin reservation on a cruise ship for a particular sailing, scheduled for a particular date. The reservation availability information is current based on information provided by cruise line companies in real time over the Internet. The technology for this capability, called SmartDecks™ technology is compatible with most widely used web browser software.

[0035] Inputting Data Into the System

[0036] FIG. 5 shows an X-Y Coordinate Generator that may be used to specify the location of cabins with respect to an electronic version of a deck plan. An operator specifies the URL of the electronic deck plan, and the cruise line, ship and deck to which the plan corresponds, using the main

menu. The deck image is loaded into the right-hand frame 50. A list of cabin coordinates (if any exist in the database) is loaded into the lower frame 52.

[0037] Next, the operator specifies the cabin ranges that the operator expects to add or alter, as shown in FIG. 6.

[0038] The operator then uses his mouse input device to train the red crosshairs 54 on the area that a cabin occupies. By doing so, the coordinates of the cabin relative to the plan are calculated and stored. If there is a mistake, the operator may repeat the crosshair placement after deleting the erroneous record in the bottom frame, as shown in FIG. 7. A zoom feature facilitates accurate cabin coordinate placement (FIG. 8).

[0039] The operator may test his work by using the testing page shown in FIG. 9. In the example shown in FIG. 9, the coordinate mapping for cabin "4001" has been misplaced to show contrast. Upon inspection, the operator may verify that all other cabin coordinate mappings have been placed appropriately relative to the deck image. The Effective Date control 56 toggles the display to contrast updates made to the coordinate set on different dates.

[0040] The cabin coordinate data sets are then matched with per-cabin reservation availability status from cruise line vendor systems (provided in real-time over the Internet as discussed above), and additional descriptive content, e.g., regarding the features of the cabins, that is stored in a database 30 (FIG. 1) that is maintained by the website server 22. This information is combined and provided to the user's computer with display instructions that can be interpreted by any of the most widely-used web browsers.

[0041] Other embodiments are within the scope of the following claims.

[0042] For example, the invention may be used in many other applications involving reservations, e.g., to manage reservations for hotel rooms, rental condos or spaces at a campground. In each case, a diagram of the space (hotel, condominium or campground) would be provided as discussed above, and users could click on a particular unit (room/condo unit/space) and obtain information regarding availability of that unit, and a view of the unit. An example of a plan for a hotel floor is shown in FIG. 10. The website may be configured so that when the user mouses over a particular unit a pop-up window showing a graphic image of that unit appears on the user's display.

[0043] The invention may also be used to manage reservations for seats in a theatre or stadium, in which case the website may be configured to allow the user to click on a particular seat and view what a person seated in that seat would see. Examples of plans for theater and stadium seating are shown in FIGS. 11-11A and 12, respectively. The website can be configured to first provide the user with an overall diagram of the entire seating plan, as shown in FIGS. 11-12, and then, when the user clicks on a particular seating section, a detailed plan of that section showing individual seats. When the user mouses over a particular seat, a pop-up window showing a graphic representation of the stage view from that seat may be provided.

[0044] As another example, the invention may be used to manage reservations for seats in restaurants, e.g., popular upscale restaurants that require advance reservations and for which a restaurant-diner would like to be able to choose a particular seat in advance.

[0045] The availability state of a unit or seat may be indicated by a blinking light, as discussed above, or by any

other suitable notation. For example, the background color of available units or seats may be different from that of units/seats that are unavailable.

What is claimed is:

1. A method comprising
  - displaying a plan of units located at a place of accommodation,
  - receiving from a user an interactive indication of a calendar period of interest,
  - receiving continually updated information about the availability for booking, during specified calendar periods, of units displayed on the plan, and
  - using the updated information to display in the vicinity of units on the plan an indicator of the availability state of units during the calendar period of interest.
2. The method of claim 1 further comprising displaying one indicator per unit.
3. The method of claim 1 further wherein the display is on a web browser.
4. The method of claim 1 wherein the place of accommodation comprises a lodging facility.
5. The method of claim 1 wherein the place of accommodation comprises a cruise ship.
6. The method of claim 1 wherein the units comprise cabins on a cruise ship.
7. The method of claim 1 wherein the plan comprises an image of a deck of a cruise ship.
8. The method of claim 1 wherein the place of accommodation comprises a hotel.
9. The method of claim 1 wherein the units comprise rooms or suites in a hotel.
10. The method of claim 1 wherein the plan comprises an image of a floor of a hotel.
11. The method of claim 1 further comprising displaying a graphic image of the interior of a unit when the user moves a pointer over the unit on the plan.
12. The method of claim 1 further comprising displaying textual information relating to features of a unit when the user moves a pointer over the unit on the plan.
13. The method of claim 1 wherein the plan comprises a seating arrangement.
14. The method of claim 13 wherein the seating arrangement is in a theatre, stadium or restaurant.
15. A method comprising
  - obtaining at least one plan of units for each of multiple places of accommodation, the different places of accommodation having different configurations,
  - making the plans of units available through a publicly accessible electronic network,
  - receiving continually updated information concerning the availability state of each of the units displayed on each plan during specified time periods, and
  - making the updated information available through the network so that it can be accessed by a user while viewing any of the plans of units.
16. The method of claim 15 wherein the network comprises the Internet.
17. The method of claim 15 wherein the places of accommodation comprise lodging facilities.

18. The method of claim 15 further including using the updated information to display an indicator in the vicinity of units on the plan of the availability state of units during a calendar period of interest.

19. The method of claim 15 wherein the plans of units comprise electronic representations of cruise ship decks.

20. A method comprising

- obtaining an electronically represented plan of units for a place of accommodation,

- displaying the plan, and

- enabling a developer to interactively associate coordinates with each unit of the plan, to identify hot spots on which a user can position a pointer to obtain information associated with each unit.

21. The method of claim 20 wherein the information includes a graphic image of the interior of a unit.

22. The method of claim 20 wherein the information includes textual information relating to features of a unit.

23. The method of claim 20 wherein the information is provided in a pop-up window.

24. A method comprising

- displaying, on a web browser, a plan of units located at a lodging facility,

- receiving an interactive indication from a user of a calendar period of interest,

- receiving continually updated information about the availability for booking of units displayed on the plan during specified calendar periods, and

- using the updated information to display one indicator per unit in the vicinity of units on the plan of the availability state of units during the calendar period of interest.

25. The method of claim 24 wherein the lodging facility comprises a cruise ship and the units are cabins.

26. A method comprising

- displaying a plan of units located at a place of accommodation,

- displaying a graphic image of the interior of a unit when a user moves a pointer over the unit on the plan.

27. A method comprising

- at a server, storing plans of accommodations available at different locations,

- receiving at the server continually updated information about the availability of the accommodations at the different locations during defined time periods, and

- making the plans and the continually updated information available on a publicly accessible communication network to customers for the accommodations.

28. A web page comprising

- a plan of units of accommodation at a location, and

- indicators on the plan in the vicinity of units of the accommodation, the indicators indicating the availability states of the units.

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# Hotel Reservations Network Taps Pegasus Systems to Expand Online Hotel Reservation Capabilities Agreement; Adds 22,000 Hotels to HRN's Consumer Web Site

PR Newswire; New York; Sep 30, 1998;

**Start Page:** 1

**Dateline:** Texas

## Abstract:

DALLAS, Sept. 30 /PRNewswire/ -- Dallas-based Pegasus Systems (Nasdaq: PEGS) today announced Hotel Reservations Network (HRN), also of Dallas, is tapping Pegasus to expand the online hotel booking capabilities on HRN's consumer site: [www.180096hotel.com](http://www.180096hotel.com).

*As a result of the agreement, HRN's Web site will now be able to provide online reservation capabilities and detailed property information on more than 22,000 hotels in 165 countries. Pegasus Systems is one of the leading sources of hotel content and booking capabilities on the Web. HRN is one of the leading Web sources of discount reservations for hotel accommodations during sold-out periods in major cities.*

*According to John F. Davis III, president and chief executive officer of Pegasus Systems, the addition of HRN's Web site to Pegasus' online distribution network provides another premier sales outlet for Pegasus Systems' hotel clients. "The growing popularity of HRN's site represents more sales opportunities for our hotel clients, as well as additional revenue opportunities for Pegasus Systems," Davis said. Pegasus receives a transaction fee from the hotels for every net reservation made at any of the sites that are part of Pegasus' online distribution network.*

## Full Text:

Copyright PR Newswire - NY Sep 30, 1998

Industry: COMPUTER/ELECTRONICS; TELECOMMUNICATIONS

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4 As a result of direct connections via THISCO(TM) to hotels' central reservations systems, Pegasus Systems' online reservation service provides third-party Web sites with direct access to the same hotel reservation and confirmation capabilities provided by Pegasus Systems' consumer retail site, TravelWeb(R) (<http://www.travelweb.com>). The advanced technology enables users of third-party Web sites to access Pegasus' database of approximately 22,000 hotels in 165 countries and provides them with the ability to shop and query room availability, view photos, make a reservation online and receive a

confirmation in seconds. THISCO(TM) is also a service of Pegasus Systems.

"HRN is very excited about the ability to greatly expand the number of properties and locations available to our customers on our Web site," said Bob Diener, president of HRN. "Our agreement with Pegasus Systems helps us to fulfill our philosophy of providing business and leisure travelers with the most value for their travel dollars."

According to the Travel Industry Association, TravelWeb(R) is one of the six "mega-sites" that account for 75 percent of all travel-related sales on the Internet. During the second quarter of 1998, Internet hotel bookings made through TravelWeb(R) and the sites that are part of Pegasus' online distribution network resulted in approximately \$37 million in hotel room sales. Internet hotel reservations processed by Pegasus Systems in the second quarter of 1998 increased 289 percent over the same period in 1997. Hotel reservations made via the Internet are expected to grow to \$4.6 billion in the year 2000, according to Forrester Research.

#### Company Information

Hotel Reservations Network (HRN) books approximately 12 percent of all hotel rooms booked worldwide on the Internet. Its sites feature state-of-the-art technology that provides direct access to the HRN hotel database, enabling travelers to quickly and easily check hotel availability and view greatly enhanced photographs of the hotels. HRN offers travelers discounts up to 65 percent off the regular rate at more than 500 properties. People who register on the site also receive free weekly travel tips via e-mail for ways to save money on airfares, hotels, car rentals and more. Cities serviced by HRN include New York, Boston, Washington D.C., Chicago, Los Angeles, San Francisco, Orlando/Disney World, Anaheim/Disneyland, New Orleans, Miami Beach, San Diego, Las Vegas, Reno, Lake Tahoe, Paris and London. More information on HRN is available at [www.180096hotel.com](http://www.180096hotel.com).

Pegasus Systems, Inc. provides global electronic commerce and transaction processing solutions to hotels, travel agencies, meetings and convention planners, corporate travel departments and Internet businesses around the world via its services that include: THISCO(TM), HCC(TM), TravelWeb(R), and Pegasus IQ(TM). Pegasus Systems has its headquarters in Dallas and offices in London. The company's stock is traded on the Nasdaq National Market under the symbol PEGS. SOURCE Pegasus Systems, Inc.

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